

CLAIMS

1. Apparatus for providing hair removal therapy to a patient, said apparatus comprising:
 - a high voltage pulse generator; and
 - an applicator electrically connected to said pulse generator, said applicator including a central electrode and an outer electrode surrounding the central electrode,wherein said generator supplies pulses to said electrodes to create an electroporating field causing hair follicle death when said central electrode is placed into contact with a hair follicle..
2. The apparatus of claim 1 wherein said central electrode is a rod-like electrode.
3. The apparatus of claim 2 wherein said outer electrode has an annular configuration.
4. The apparatus of claim 3 wherein said generator produces pulses having a duration exceeding 1 microsecond.
5. The apparatus of claim 3 wherein said generator produces pulses having a duration in the range of 0.1 nanosecond to 1 microsecond.
6. The apparatus of claim 1 wherein said central electrode is a needle electrode.
7. The apparatus of claim 6 wherein said outer electrode has an annular configuration.

8. The apparatus of claim 7 wherein said generator generates pulses having a duration exceeding 1 microsecond.
9. The apparatus of claim 1 and further including a TENS system for providing a patient relief from discomfort caused by the application of electroporating pulses.
10. The apparatus of claim 9 wherein said TENS system includes a TENS generator for generation TENS pulses and a synchronizing circuit for synchronizing the application to a patient of TENS pulses and electroporating pulses.
11. The apparatus of claim 10 wherein said applicator includes TENS electrodes for applying TENS therapy to the patient during electroporating treatment.
12. The apparatus of claim 11 wherein said TENS electrodes comprise said central and said outer electrodes.
13. The apparatus of claim 11 wherein said TENS electrodes comprise said central applicator electrode and a third electrode disposed outwardly from said outer electrode.
14. The apparatus of claim 13 wherein said third electrode has a substantially annular configuration.
15. A method for removing hair from a patient, said method comprising:
providing an electroporation system including:
an applicator having a central electrode and an outer electrode having a substantially annular configuration; and

a high voltage generator for providing electroporating pulses to the central and outer electrodes, the generator being electrically connected to the applicator;
placing the central electrode in contact with a hair follicle whose removal is desired; and
providing electroporating pulses to the electrodes for a predetermined time interval sufficient to result in the death of the hair follicle from electroporation.

16. The method of claim 15 and further including providing TENS therapy to the patient during electroporation treatment for hair removal.

17. The method of claim 16 and further including:
providing a TENS therapy system comprising a TENS generator for supplying TENS pulses to the patient and a synchronizing circuit to synchronize the application of TENS pulses and electroporation pulses to the patient.

18. The method of claim 17 wherein the TENS therapy pulses are provided to the central and outer electrodes.

19. The method of claim 17 wherein the TENS therapy system further includes a third electrode configured to engage a larger area of patient skin surface than the outer electrode and wherein the TENS generator provides TENS therapy pulses to the central and third electrodes.